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W P S R L A  
(TM)  
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MPSrch\_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Thu Dec 23 10:07:33 1999; MasPar time 2.92 Seconds  
Tabular output not generated. 82.300 Million cell updates/sec

Title: >US-09-177-843-1  
Description: (1-6) from US09177843.ppep  
Perfect Score: 41  
Sequence: 1 GRGDSP 6

Scoring table: PAM 150  
Gap 15

Searched: 122810 seqs, 4008593 residues

Post-processing: Minimum Match 0%  
Listing first 45 summaries

Database: pir60  
1.pir1 2.pir2 3.pir3 4.pir4

Statistics: Mean 18.378; Variance 18.028; scale 1.019

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Length	ID	Description	Pred. No.
1	41	100.0	273	2 A28512 fibronectin - chicken	2.79e+00
2	41	100.0	1020	2 A29355 fibronectin - chicken	2.79e+00
3	41	100.0	2265	1 FNBO fibronectin - bovine	2.79e+00
4	41	100.0	2386	1 FNHU fibronectin precursor	2.79e+00
5	41	100.0	2477	2 S14428 fibronectin precursor	2.79e+00
6	41	100.0	2481	2 A43908 fibronectin - African	2.79e+00
7	40	97.6	625	2 A34615 profilaggrin - rat (f	5.07e+00
8	39	95.1	370	2 S27344 hupK protein - Rhizob	9.12e+00
9	38	92.7	64	2 S17384 T-cell receptor beta	1.62e+01
10	38	92.7	72	2 A42856 EPF autoantibody-reac	1.62e+01
11	38	92.7	316	2 F11338 probable ribose/galac	1.62e+01
12	38	92.7	425	2 S48469 probable membrane pro	1.62e+01
13	38	92.7	463	1 S74845 tldd homolog slr0863	1.62e+01
14	38	92.7	490	2 A29782 unspecific monooxygen	1.62e+01
15	38	92.7	825	2 JC4163 DNA-binding protein 5	1.62e+01
16	38	92.7	1265	2 A37967 neural cell adhesion	1.62e+01
17	38	92.7	1272	2 S26180 neurofascin - chicken	1.62e+01
18	37	90.2	235	2 B41326 nitrite hydratase (BC	2.86e+01
19	37	90.2	492	2 A32525 steroid 21-monooxygen	2.86e+01
20	37	90.2	715	2 B70741 probable moey protein	2.86e+01
21	37	90.2	953	2 S55156 probable membrane pro	2.86e+01
22	37	90.2	1095	2 T00329 hypothetical protein	2.86e+01
23	37	90.2	1189	2 JC6118 SH2-containing inosit	2.86e+01

24	36	87.8	250	2 B35026	filaggrin B - mouse (	4.98e+01
25	36	87.8	254	2 A31488	filaggrin A - mouse	4.98e+01
26	36	87.8	255	2 A35026	pol polyprotein - sim	4.98e+01
27	36	87.8	294	2 A05071	filaggrin precursor -	4.98e+01
28	36	87.8	313	2 A28444	vinculin - mouse (fra	4.98e+01
29	36	87.8	352	2 A60655	3-ketosteroid-detal-d	4.98e+01
30	36	87.8	511	2 JE0312	hypothetical protein	4.98e+01
31	36	87.8	699	2 T01029	infected cell protein	4.98e+01
32	36	87.8	780	1 WMBE88	hypothetical 115.5K p	4.98e+01
33	36	87.8	1106	2 JQ0405	meta-vinculin - chick	4.98e+01
34	36	87.8	1134	1 A35955	meta-vinculin - human	4.98e+01
35	36	87.8	1135	1 A29997	DNA-directed DNA poly	4.98e+01
36	36	87.8	1240	1 DJBE21	myosin heavy chain, p	8.58e+01
37	35	85.4	95	2 B25436	myosin heavy chain, t	8.58e+01
38	35	85.4	163	2 B25380	myosin heavy chain -	8.58e+01
39	35	85.4	189	2 A25380	dhak-type molecular c	8.58e+01
40	35	85.4	655	2 S18349	Myd116 protein - mous	8.58e+01
41	35	85.4	657	2 S10001	myosin heavy chain 2,	8.58e+01
42	35	85.4	1201	2 B35815	beta-glycosidase comp	8.58e+01
43	35	85.4	1926	2 S01169	myosin heavy chain 2,	8.58e+01
44	35	85.4	2411	2 B32491	proline-rich peptides	8.58e+01
45	35	85.4	5762	2 A41819		

ALIGNMENTS

RESULT 1

ENTRY #type fragment  
TITLE fibronectin - chicken (fragment)  
ORGANISM #formal name Gallus gallus #common name chicken  
DATE 31-Dec-1988 #sequence\_revision 31-Dec-1988 #text\_change 12-Feb-1999

ACCESSIONS A28512  
REFERENCE A28512  
#authors Kubomura, S.; Obara, M.; Karasaki, Y.; Taniguchi, H.; Gotoh, S.; Tsuda, T.; Higashi, K.; Ohsato, K.; Hirano, H.  
#journal Biochim. Biophys. Acta (1987) 910:171-181  
#title Genetic analysis of the cell binding domain region of the chicken fibronectin gene.  
#cross-references MUID:88050950  
#accession A28512  
#molecule\_type DNA  
#residues 1-273 #label KUB  
#note the authors translated the codon CCG for residue 190 as Gln, CAG for residue 243 as Glu, and GAG for residue 246 as Gln

GENETICS 90/1; 129/1; 184/1; 236/1  
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology; fibronectin type II repeat homology; fibronectin type III repeat homology  
KEYWORDS alternative splicing; duplication; extracellular matrix; glycoprotein; heterodimer  
FEATURE #domain fibronectin type III repeat homology (fragment)  
1-82 #label FN31  
90-172 #domain fibronectin type III repeat homology #label FN31  
167-169 #region cell attachment (R-G-D) motif  
184-266 #domain fibronectin type III repeat homology #label FN3K  
SUMMARY #length 273 #checksum 9875  
Query Match 100.0%; Score 41; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 2.79e+00;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 166 GRGDSP 171  
Qy 1 GRGDSP 6  
RESULT 2

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ENTRY      A29355      #type fragment
TITLE      fibronectin - chicken (fragment)
ORGANISM   #formal_name Gallus gallus #common_name chicken
DATE       31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change
12-Feb-1999

ACCESSIONS A29355
REFERENCE   A29355
#authors   Norton, P.A.; Hynes, R.O.
#journal   Mol. Cell. Biol. (1987) 7:4297-4307
#title     Alternative splicing of chicken fibronectin in embryos and in
           normal and transformed cells.
#cross-references MUID:88142820
#accession A29355
#molecule_type mRNA
#residues  1-1020 #label NOR

GENETICS   176/3
#introns
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
fibronectin type II repeat homology; fibronectin type III
repeat homology
KEYWORDS    alternative splicing; duplication; extracellular matrix;
glycoprotein; heterodimer
FEATURE     1-86
           92-177      #domain fibronectin type III repeat homology #label
           FN3H\
           180-262      #domain fibronectin type III repeat homology #label
           FN3I\
           257-259      #domain fibronectin type III repeat homology #label
           FN3J\
           274-356      #region cell attachment (R-G-D) motif\
           FN3K\
           364-446      #domain fibronectin type III repeat homology #label
           FN3L\
           454-536      #domain fibronectin type III repeat homology #label
           FN3M\
           546-628      #domain fibronectin type III repeat homology #label
           FN3N\
           636-718      #domain fibronectin type III repeat homology #label
           FN3O\
           837-917      #domain fibronectin type III repeat homology #label
           FN3P\
           940-979      #domain fibronectin type I repeat homology #label 1F10\
           940-969,967-979,
           985-1012      #disulfide_bonds #status predicted
           #length 1020 #checksum 8617

SUMMARY
Query Match      100.0%; Score 41; DB 2; Length 1020;
Best Local Similarity 100.0%; Pred. No. 2,79e+00;
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 256 GRGDSF 261
   |||||
Qy 1 GRGDSF 6

RESULT      3
ENTRY
TITLE      FNBO      #type complete
ORGANISM   fibronectin - bovine
DATE       31-Dec-1988 #formal_name Bos primigenius taurus #common_name cattle
12-Feb-1999 #sequence_revision 31-Dec-1988 #text_change

ACCESSIONS A26452; B21165; A23292
REFERENCE   A26452
#authors   Skorstengaard, K.; Jensen, M.S.; Sahl, P.; Petersen, T.E.;
           Magnusson, S.
#journal   Eur. J. Biochem. (1986) 161:441-453
#title     Complete primary structure of bovine plasma fibronectin.
#cross-references MUID:87054047
#accession A26452
#molecule_type protein
#residues  1-2265 #label SKO
REFERENCE   A21165

```

```

#authors   Kornblihtt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.
#journal   Proc. Natl. Acad. Sci. U.S.A. (1983) 80:3218-3222
#title     Isolation and characterization of cDNA clones for human and
           bovine fibronectins.
#cross-references MUID:83221567
#accession B21165
#molecule_type mRNA
#residues  2170-2265 #label KOR
#cross-references GB:K00800
REFERENCE   A23292
#authors   Petersen, T.E.; Thøgersen, H.C.; Skorstengaard, K.;
           Vibe-Pedersen, K.; Sahl, P.; Sottrup-Jensen, L.; Magnusson,
           S.
#journal   Proc. Natl. Acad. Sci. U.S.A. (1983) 80:137-141
#title     Partial primary structure of bovine plasma fibronectin: three
           types of internal homology.
#accession A23292
#molecule_type protein
#residues  1-16,'C',18-20,'S',22-432;447-463;1367-1517;1567-1673;
           2062-2176,'N',2178-2265 #label PET
COMMENT     Cys-1201 and Cys-2015 have free sulfhydryl groups.
           The plasma fibronectin molecule consists of two chains, which are
           connected by disulfide bonds near the carboxyl ends. The chains
           partly differ due to the alternate splicing of mRNA.
COMMENT     Fibronectins bind cell surfaces and various compounds including
           collagen, fibrin, heparin, DNA, and actin. Fibronectins are
           involved in cell adhesion, cell motility, opsonization, wound
           healing, and maintenance of cell shape.
COMMENT     Plasma fibronectin is synthesized by hepatocytes.
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
fibronectin type II repeat homology; fibronectin type III
repeat homology
KEYWORDS    acute phase; alternative splicing; collagen binding;
duplication; extracellular matrix; glycoprotein; heparin
binding; heterodimer; liver; phosphoprotein; plasma;
pyroglutamic acid
FEATURE     21-241      #domain fibrin and heparin binding #label FBR\
           21-56        #domain fibronectin type I repeat homology #label 1F1\
           66-104        #domain fibronectin type I repeat homology #label 1F2\
           110-148        #domain fibronectin type I repeat homology #label 1F3\
           155-194        #domain fibronectin type I repeat homology #label 1F4\
           200-239        #domain fibronectin type I repeat homology #label 1F5\
           277-577        #domain collagen binding #label CBR\
           329-370        #domain fibronectin type I repeat homology #label 1F6\
           389-430        #domain fibronectin type II repeat homology #label 2F1\
           439-477        #domain fibronectin type II repeat homology #label 2F2\
           487-524        #domain fibronectin type I repeat homology #label 1F7\
           530-568        #domain fibronectin type I repeat homology #label 1F8\
           578-661        #domain fibronectin type III repeat homology #label 1F9\
           FN3A\
           688-770        #domain fibronectin type III repeat homology #label
           FN3B\
           779-860        #domain fibronectin type III repeat homology #label
           FN3C\
           875-957        #domain fibronectin type III repeat homology #label
           FN3D\
           965-1046       #domain fibronectin type III repeat homology #label
           FN3E\
           1055-1134      #domain fibronectin type III repeat homology #label
           FN3F\
           1142-1227      #domain fibronectin type III repeat homology #label
           FN3G\
           1235-1318      #domain fibronectin type III repeat homology #label
           FN3H\
           1326-1404      #domain fibronectin type III repeat homology #label
           GN3I\
           1410-1517      #domain cell attachment #label CAD\
           1416-1502      #domain fibronectin type III repeat homology #label
           FN3J\
           1493-1495      #region cell attachment (R-G-D) motif\
           1510-1592      #domain fibronectin type III repeat homology #label

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FN3K\
#domain heparin binding #label HB2\
#domain fibronectin type III repeat homology #label FN3L\
#domain fibronectin type III repeat homology #label FN3M\
#domain fibronectin type III repeat homology #label FN3N\
#region cell attachment (R-G-D) motif\
#domain fibronectin type III repeat homology #label FN3O\
#domain fibrin binding #label FB2\
#domain fibronectin type I repeat homology #label 1F10\
#domain fibronectin type I repeat homology #label 1F11\
#domain fibronectin type I repeat homology #label 1F12\
#modified_site pyrrolidone carboxylic acid (Gln) #status experimental\
#cross-link isopeptide (Gln) (interchain to fibrin) #status experimental\
21-47,45-56,66-94,
92-104,110-138,
136-148,155-184,
182-194,200-229,
227-239,277-304,
302-311,329-355,
343-370,389-415,
403-430,439-467,
465-477,487-514,
512-524,530-558,
556-568,2085-2114,
2112-2124,
2130-2157,
2155-2167,
2174-2200,
2198-2209
399,497,511,846,
976,1213,1987
#disulfide_bonds #status predicted\
#binding_site carbohydrate (Asn) (covalent) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status absent\
#binding_site carbohydrate (Thr) (covalent) #status experimental\
#disulfide_bonds interchain (to 2250) #status predicted\
#disulfide_bonds interchain (to 2246) #status predicted\
#binding_site phosphate (Ser) (covalent) #status experimental\
SUMMARY      #length 2265 #molecular-weight 249556 #checksum 6613
Query Match      100.0%; Score 41; DB 1; Length 2265;
Best Local Similarity 100.0%; Pred. No. 2,79e+00;
Matches      6; Conservative      0; Mismatches      0; Indels      0; Gaps      0;

Db 1492 GRGDSP 1497
      |||||
Qy      1 GRGDSP 6

RESULT      4
ENTRY      FNHU      #type complete
TITLE      fibronectin precursor - human
ALTERNATE_NAMES      fibronectin splice form ED-A
ORGANISM      #formal_name Homo sapiens #common_name man
DATE      26-Feb-1999
ACCESSIONS      A26460; A26284; S03917; A24476; A91008; A93529;
      A21011; A90495; B22245; B22245; I65273; A21165; A92398;
      S34791; A60904; A23901; A92386; A32517; S14357; A23891;
      A03213; S10592
REFERENCE      A26460
#authors      Dean, D.C.; Bowlus, C.L.; Bourgeois, S.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1987) 84:1876-1880
#title      Cloning and analysis of the promoter region of the human
      fibronectin gene.

```

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#cross-references MUID:87175578
#accession      A26460
#molecule_type DNA
#residues      1-49 #label DEA
#cross-references GB:M15801; NID:g182686; PID:g553293
REFERENCE      A26284
#authors      Oldberg, A.; Ruoslahti, E.
#journal      J. Biol. Chem. (1986) 261:2113-2116
#title      Evolution of the fibronectin gene.
#cross-references MUID:86111901
#accession      A26284
#molecule_type DNA
#residues      1447-1540 #label OLD
#cross-references GB:M12549; NID:g182688
#note      the authors translated the codon TTC for residue 1494 as
      Gln
REFERENCE      S00848
#authors      Paolletta, G.; Henschliffe, C.; Sebastio, G.; Baralle, F.E.
#journal      Nucleic Acids Res. (1988) 16:3545-3557
#title      Sequence analysis and in vivo expression show that
      alternative splicing of ED-B and ED-A regions of the human
      fibronectin gene are independent events.
#cross-references MUID:88233940
#accession      S03917
#molecule_type DNA
#residues      1594-1767, 'V', 1769-1783 #label PAO
#cross-references EMBL:X07718; NID:g31402
#note      the authors translated the codon AAC for residue 1631 as
      Asp
REFERENCE      A24854
#authors      Vibe-Pedersen, K.; Magnusson, S.; Baralle, F.E.
#journal      FEBS Lett. (1986) 207:287-291
#title      Donor and acceptor splice signals within an exon of the human
      fibronectin gene: a new type of differential splicing.
#cross-references MUID:87030929
#accession      A24854
#molecule_type DNA
#residues      1992-2147 #label VIB
#cross-references GB:X04530; NID:g31436
REFERENCE      A24476
#authors      Gutman, A.; Yamada, K.M.; Kornblitt, A.
#journal      FEBS Lett. (1986) 207:145-148
#title      Human fibronectin is synthesized as a pre-propolypeptide.
#cross-references MUID:87030890
#accession      A24476
#status      not compared with conceptual translation
#molecule_type mRNA
#residues      1-14, 'Q', 16-38 #label GUT
REFERENCE      A91008
#authors      Kornblitt, A.R.; Umezawa, K.; Vibe-Pedersen, K.; Baralle,
      F.E.
#journal      EMBO J. (1985) 4:1755-1759
#title      Primary structure of human fibronectin: differential splicing
      may generate at least 10 polypeptides from a single gene.
#cross-references MUID:85284965
#accession      A91008
#status      nucleic acid sequence not shown
#molecule_type mRNA
#residues      32-1344, 1346-2080; 2112-2386 #label KOR
#cross-references GB:X02761
REFERENCE      A93529
#authors      Kornblitt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.
#journal      Nucleic Acids Res. (1984) 12:5853-5868
#title      Human fibronectin: cell specific alternative mRNA splicing
      generates polypeptide chains differing in the number of
      internal repeats.
#cross-references MUID:84272258
#accession      A93529
#molecule_type mRNA
#residues      973-2080; 2112-2386 #label KO2
#cross-references GB:X00739
REFERENCE      A21011
#authors      Oldberg, A.; Linney, E.; Ruoslahti, E.

```

#journal J. Biol. Chem. (1983) 258:10193-10196  
#title Molecular cloning and nucleotide sequence of a cDNA clone coding for the cell attachment domain in human fibronectin.  
#cross-references MUID:83290929  
#accession A21011  
##molecule\_type mRNA  
##residues 1434-1537 ##label OL2  
##cross-references GB:K00055; NID:g182680; PID:g182683  
REFERENCE A90495  
#authors Bernard, M.P.; Kolbe, M.; Weil, D.; Chu, M.L.  
#journal Biochemistry (1985) 24:2698-2704  
#title Human cellular fibronectin: comparison of the carboxyl-terminal portion with rat identifies primary structural domains separated by hypervariable regions.  
#cross-references MUID:85280409  
#accession A90495  
##molecule\_type mRNA  
##residues 1594-2386 ##label BER  
##cross-references GB:M10905; NID:g182696; PID:g182697  
REFERENCE A22445  
#authors Umezawa, K.; Kornblitt, A.R.; Baralle, F.E.  
#journal FEBS Lett. (1985) 186:31-34  
#title Isolation and characterization of cDNA clones for human liver fibronectin.  
#cross-references MUID:85231203  
#accession A22445  
##molecule\_type mRNA  
##residues 1948-2067 ##label UME  
##cross-references GB:M27589; NID:g182705; PID:g182706  
#accession B22445  
##molecule\_type mRNA  
##residues 1975-1991; 2017-2039 ##label UM2  
##cross-references GB:M27590  
REFERENCE I52394  
#authors Sekiguchi, K.; Klos, A.M.; Kurachi, K.; Yoshitake, S.; Hakomori, S.  
#journal Biochemistry (1986) 25:4936-4941  
#title Human liver fibronectin complementary DNAs: identification of two different messenger RNAs possibly encoding the alpha and beta subunits of plasma fibronectin.  
#cross-references MUID:87026578  
#accession I65273  
##status preliminary; translated from GB/EMBL/DBJ  
##molecule\_type mRNA  
##residues 1978-1990, 2016-2018, 'N', 2020-2081, 2113-2127 ##label SEK  
##cross-references GB:M14060; NID:g182701; PID:g182704  
REFERENCE A21165  
#authors Kornblitt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.  
#journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:3218-3222  
#title Isolation and characterization of cDNA clones for human and bovine fibronectins.  
#cross-references MUID:83221567  
#accession A21165  
##molecule\_type mRNA  
##residues 2291-2386 ##label KO3  
##cross-references GB:K00799; NID:g182681; PID:g182684  
REFERENCE A92398  
#authors Garcia-Pardo, A.; Pearlstein, E.; Frangione, B.  
#journal J. Biol. Chem. (1983) 258:12670-12674  
#title Primary structure of human plasma fibronectin.  
#cross-references MUID:84032463  
#accession A92398  
##molecule\_type protein  
##residues 32-47, 'C', 49-51, 'S', 53-72, 'A', 74-290 ##label GAR1  
REFERENCE S34791  
#authors Garcia-Pardo, A.; Gold, L.I.  
#journal Arch. Biochem. Biophys. (1993) 304:181-188  
#title Further characterization of the binding of fibronectin to gelatin reveals the presence of different binding interactions.  
#accession S34791  
##molecule\_type protein  
##residues 291-300; 551-560 ##label GAR2

REFERENCE A60904  
#authors Griffin, C.A.; Calaycay, J.; Shively, J.E.; Smith, R.L.  
#journal Thromb. Res. (1986) 43:469-477  
#title Two plasma fibronectin fragments with different gelatin-binding properties.  
#cross-references MUID:87019725  
#accession A60904  
##molecule\_type protein  
##residues 293-301 ##label GRI  
REFERENCE A23901  
#authors Calaycay, J.; Pande, H.; Lee, T.; Borsi, L.; Siri, A.; Shively, J.E.; Zardi, L.  
#journal J. Biol. Chem. (1985) 260:12136-12141  
#title Primary structure of a DNA- and heparin-binding domain (domain III) in human plasma fibronectin.  
#cross-references MUID:86008277  
#accession A23901  
##molecule\_type protein  
##residues 616-677, 'Q', 679-703, 'PT' ##label CAL  
REFERENCE A92386  
#authors Pierschbacher, M.D.; Ruoslahti, E.; Sundelin, J.; Lind, P.; Peterson, P.A.  
#journal J. Biol. Chem. (1982) 257:9593-9597  
#title The cell attachment domain of fibronectin. Determination of the primary structure.  
#cross-references MUID:82265604  
#accession A92386  
##molecule\_type protein  
##residues 1441-1548 ##label PIE  
##note residues 1524-1527 are responsible for the cell-binding activity  
REFERENCE A32517  
#authors Garcia-Pardo, A.; Rostagno, A.; Frangione, B.  
#journal Biochem. J. (1987) 241:923-928  
#title Primary structure of human plasma fibronectin. Characterization of a 38 kDa domain containing the C-terminal heparin-binding site (Hep III site) and a region of molecular heterogeneity.  
#cross-references MUID:87241275  
...  
Note: remainder of annotations omitted.  
Query Match 100.0%; Score 41; DB 1; Length 2386;  
Best Local Similarity 100.0%; Pred. No. 2.79e+00;  
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
Db 1523 GRGDSP 1528  
QY 1 GRGDSP 6  
|||||  
RESULT 5  
ENTRY S14428 #type complete  
TITLE fibronectin precursor - rat  
ORGANISM #formal\_name Rattus norvegicus #common\_name Norway rat  
DATE 28-Oct-1994 #sequence\_revision 28-Oct-1994 #text\_change 12-Feb-1999  
ACCESSIONS S14428; S12455; A22319; S46203; S00459; A27252; I59049  
REFERENCE S14428  
#authors Hynes, R.O.  
#submission submitted to the EMBL Data Library, July 1989  
#accession S14428  
##molecule\_type mRNA  
##residues 1-2477 ##label HYN  
##cross-references EMBL:X15906; NID:g56163; PID:g56164  
REFERENCE S12455  
#authors Schwarzbauer, J.E.; Patel, R.S.; Fonda, D.; Hynes, R.O.  
#journal EMBO J. (1987) 6:2573-2580  
#title Multiple sites of alternative splicing of the rat fibronectin gene transcript.  
#cross-references MUID:88054951  
#accession S12455  
##status nucleic acid sequence not shown



```

6
RESULT 6
ENTRY   A43908      #type complete
TITLE   fibronectin - African clawed frog
ORGANISM #formal_name Xenopus laevis #common_name African clawed frog
DATE     31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change
        12-Feb-1999
ACCESSIONS
REFERENCE A43908
#authors DeSimone, D.W.; Norton, P.A.; Hynes, R.O.
#journal Dev. Biol. (1992) 149:357-369
#title Identification and characterization of alternatively spliced
        fibronectin mRNAs expressed in early Xenopus embryos.
#cross-references MIM:92111942
#accession A43908
##status nucleic acid sequence not shown; not compared with
        conceptual translation
##molecule_type mRNA
##residues 1-2481 ##label DES
##cross-references GB:M77820
##note sequence extracted from NCBI backbone (NCBIP:77473)
CLASSIFICATION
#superfamily fibronectin; fibronectin type I repeat homology;
        fibronectin type II repeat homology; fibronectin type III
        repeat homology
#duplication; extracellular matrix; glycoprotein; heterodimer

KEYWORDS
FEATURE
53-90      #domain fibronectin type I repeat homology #label 1F1\
100-138    #domain fibronectin type I repeat homology #label 1F2\
144-182    #domain fibronectin type I repeat homology #label 1F3\
189-228    #domain fibronectin type I repeat homology #label 1F4\
234-273    #domain fibronectin type I repeat homology #label 1F5\
309-343    #domain fibronectin type I repeat homology #label 1F6\
361-402    #domain fibronectin type II repeat homology #label 2F1\
421-462    #domain fibronectin type II repeat homology #label 2F2\
471-509    #domain fibronectin type I repeat homology #label 1F7\
519-556    #domain fibronectin type I repeat homology #label 1F8\
562-600    #domain fibronectin type I repeat homology #label 1F9\
610-693    #domain fibronectin type III repeat homology #label
        FN3A\
719-801    #domain fibronectin type III repeat homology #label
        FN3B\
810-891    #domain fibronectin type III repeat homology #label
        FN3C\
906-988    #domain fibronectin type III repeat homology #label
        FN3D\
996-1077   #domain fibronectin type III repeat homology #label
        FN3E\
1086-1165  #domain fibronectin type III repeat homology #label
        FN3F\
1173-1258  #domain fibronectin type III repeat homology #label
        FN3G\
1266-1349  #domain fibronectin type III repeat homology #label
        FN3H\
1357-1440  #domain fibronectin type III repeat homology #label
        FN3I\
1448-1530  #domain fibronectin type III repeat homology #label
        FN3J\
1538-1620  #domain fibronectin type III repeat homology #label
        FN3K\
1615-1617  #region cell attachment (R-G-D) motif\
1632-1714  #domain fibronectin type III repeat homology #label
        FN3L\
1722-1804  #domain fibronectin type III repeat homology #label
        FN3M\
1812-1894  #domain fibronectin type III repeat homology #label
        FN3N\
1904-1985  #domain fibronectin type III repeat homology #label
        FN3O\
1993-2075  #domain fibronectin type III repeat homology #label
        FN3P\
2197-2277  #domain fibronectin type III repeat homology #label
        FN3Q\
2301-2340  #domain fibronectin type I repeat homology #label 1F10\
2346-2383  #domain fibronectin type I repeat homology #label 1F11\

#domain fibronectin type I repeat homology #label 1F12\
2390-2425
55-81,79-90,
100-128,126-138,
144-172,170-182,
189-218,216-228,
234-263,261-273,
309-336,334-343,
361-387,375-402,
421-447,435-462,
471-499,497-509,
519-546,544-556,
562-590,588-600,
2301-2330,
2328-2340,
2346-2373,
2371-2383,
2390-2416,
2414-2425,
2459
2463
SUMMARY
#length 2481 #molecular-weight 272716 #checksum 7955
#disulfide_bonds #status predicted\
#disulfide_bonds interchain (to 2463) #status predicted\
#disulfide_bonds interchain (to 2459) #status predicted\
#length 2481 #molecular-weight 272716 #checksum 7955

Query Match 100.0%; Score 41; DB 2; Length 2481;
Best Local Similarity 100.0%; Pred. No. 2.79e+00;
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1614 GRGDSP 1619
Qy 1 GRGDSP 6
|||||

RESULT 7
ENTRY   A34615      #type fragment
TITLE   profilaggrin - rat (fragment)
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE     29-Jun-1990 #sequence_revision 09-Oct-1992 #text_change
        10-Sep-1997
ACCESSIONS A34615
REFERENCE A34615
#authors Haydock, P.V.; Dale, B.A.
#journal DNA Cell Biol. (1990) 9:251-261
#title Flaggrin, an intermediate filament-associated protein:
        structural and functional implications from the sequence of
        a cDNA from rat.
#cross-references MIM:90274870
#accession A34615
#status preliminary
#molecule_type mRNA
#residues 1-625 #label HAY
#cross-references GB:M21759; NID:G204143; PID:G204144
#note the authors translated the codon GAA for residue 568 as
        Gln

KEYWORDS epidermis
SUMMARY #length 625 #checksum 6240

Query Match 97.6%; Score 40; DB 2; Length 625;
Best Local Similarity 83.3%; Pred. No. 5.07e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 126 GRGESP 131
Qy 1 GRGDSP 6
|||||

RESULT 8
ENTRY   S27344      #type complete
TITLE   hupK protein - Rhizobium leguminosarum
ORGANISM #formal_name Rhizobium leguminosarum
DATE     25-Oct-1994 #sequence_revision 01-Dec-1995 #text_change
        17-Mar-1999
ACCESSIONS S27344
REFERENCE S27340
#authors Rey, L.; Hidalgo, E.; Palacios, J.; Ruiz-Argueso, T.

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#journal      J. Mol. Biol. (1992) 228:998-1002
#title        Nucleotide sequence and organization of an H(2)-uptake gene
               cluster from Rhizobium leguminosarum bv. viciae containing
               a rubredoxin-like gene and four additional open reading
               frames.
#cross-references MUID:93108466
#accession     S27344
#status        preliminary
#molecule_type DNA
#residues      1-370
#length 370 #molecular-weight 38751 #checksum 1548
SUMMARY
Query Match      95.1%; Score 39; DB 2; Length 370;
Best Local Similarity 83.3%; Pred. No. 9.12e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 163 GRGDP 168
Qy 1 GRGDSP 6
||||:|

RESULT 9
ENTRY  S17384 #type fragment
TITLE  T-cell receptor beta chain V region (clone IGRb07) - human
               (fragment)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 25-Feb-1994 #sequence_revision 10-Nov-1995 #text_change
               08-Sep-1997
ACCESSIONS S17384
REFERENCE  Ferradini, L.; Roman-Roman, S.; Azocar, J.; Michalaki, H.;
               Triebel, F.; Hercend, T.
#authors      Eur. J. Immunol. (1991) 21:935-942
#journal      Studies on the human T cell receptor alpha/beta variable
#title        region genes. II. Identification of four additional V(beta)
               subfamilies.
#cross-references MUID:91209402
#accession     S17384
#status        preliminary
#molecule_type mRNA
#residues      1-64 #label FER
#cross-references EMBL:X58804; NID:g33535; PID:g33536
CLASSIFICATION #superfamily Immunoglobulin V region; immunoglobulin homology
KEYWORDS T-cell receptor
SUMMARY #length 64 #checksum 8194

Query Match      92.7%; Score 38; DB 2; Length 64;
Best Local Similarity 83.3%; Pred. No. 1.62e-01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 26 GRGNP 31
Qy 1 GRGDSP 6
||||:|

RESULT 10
ENTRY  A42856 #type fragment
TITLE  EPF autoantibody-reactive epitope - human (fragment)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 10-Jun-1993 #sequence_revision 18-Nov-1994 #text_change
               11-Apr-1995
ACCESSIONS A42856
REFERENCE  Liu, Z.; Diaz, L.A.; Haas, A.L.; Giudice, G.J.
#authors      J. Biol. Chem. (1992) 267:15829-15835
#journal      cDNA cloning of a novel human ubiquitin carrier protein. An
#title        antigenic domain specifically recognized by endemic
               pemphigus foliaceus autoantibodies is encoded in a
               secondary reading frame of this human epidermal transcript.
#cross-references MUID:93248449
#accession     A42856
#status        preliminary

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#molecule_type mRNA
#residues      1-72 #label LIU
#experimental_source keratinocyte
#note          sequence extracted from NCBI backbone (NCBIN:109895,
               NCBIP:109896)
SUMMARY #length 72 #checksum 6087

Query Match      92.7%; Score 38; DB 2; Length 72;
Best Local Similarity 83.3%; Pred. No. 1.62e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 12 GRGDP 17
Qy 1 GRGDSP 6
||||:|

RESULT 11
ENTRY  F71338 #type complete
TITLE  probable ribose/galactose ABC transporter, permease protein
               (rbsc-2) - syphilis spirochete
ORGANISM #formal_name Treponema pallidum subsp. pallidum #common_name
               syphilis spirochete
DATE 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change
               17-Mar-1999
ACCESSIONS F71338
REFERENCE  Fraser, C.M.; Norris, S.J.; Weinstock, G.M.; White, O.;
               Sutton, G.G.; Dodson, R.; Gwinn, M.; Hickey, E.K.; Clayton,
               R.; Ketchum, K.A.; Sodergren, E.; Hardham, J.M.; McLeod,
               M.P.; Salzberg, S.; Peterson, J.; Khalak, H.; Richardson,
               D.; Howell, J.K.; Chidambaram, M.; Utterback, T.; McDonald,
               L.; Artiaach, P.; Bowman, C.; Cotton, M.D.; Fujii, C.;
               Garland, S.; Hatch, B.; Horst, K.; Roberts, K.; Watthey,
               L.; Weidman, J.; Smith, H.O.; Venter, J.C.
#journal      Science (1998) 281:375-388
#title        Complete genome sequence of Treponema pallidum, the syphilis
               spirochete.
#cross-references MUID:98332770
#accession     F71338
#status        preliminary; nucleic acid sequence not shown;
               translation not shown
#molecule_type DNA
#residues      1-316 #label COL
#cross-references GB:AE001212; GB:AE000520; NID:g3322597; PID:g3322600
GENETICS #experimental_source strain Nichols

#gene          TP0323
SUMMARY #length 316 #molecular-weight 33824 #checksum 4213

Query Match      92.7%; Score 38; DB 2; Length 316;
Best Local Similarity 66.7%; Pred. No. 1.62e+01;
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 298 GRGEAP 303
Qy 1 GRGDSP 6
||||:|

RESULT 12
ENTRY  S48469 #type complete
TITLE  probable membrane protein YIL103w - yeast (Saccharomyces
               cerevisiae)
ORGANISM #formal_name Saccharomyces cerevisiae
DATE 02-Dec-1994 #sequence_revision 02-Dec-1994 #text_change
               29-Jan-1999
ACCESSIONS S48469
REFERENCE  Bowman, S.; Churcher, C.
#authors      #submission submitted to the EMBL Data Library, September 1994
#accession     S48469
#molecule_type DNA
#residues      1-425 #label BOW
#cross-references GB:Z47047; EMBL:Z38125; NID:g603997; PID:g763243;

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GENETICS
#map_position 9L
CLASSIFICATION #superfamily Archaeoglobus fulgidus conserved hypothetical
protein AF1803
KEYWORDS transmembrane protein
FEATURE
155-171
334-350
SUMMARY #domain transmembrane #status predicted #label TM1\
#domain transmembrane #status predicted #label TM2
#length 425 #molecular-weight 48310 #checksum 8020

Query Match 92.7%; Score 38; DB 2; Length 425;
Best Local Similarity 66.7%; Pred. No. 1.62e+01;
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 415 GRGETP 420
||||:|
QY 1 GRGDSP 6

RESULT 13
ENTRY S74845 #type complete
TITLE t1dd homolog sir0863 - Synecocystis sp. (strain PCC 6803)
ORGANISM #formal_name Synecocystis sp.
#variety PCC 6803
DATE 29-Jan-1999 #sequence_revision 29-Jan-1999 #text_change
01-Feb-1999
ACCESSIONS S74845
REFERENCE S74322
#authors Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.;
Nakamura, Y.; Miyajima, N.; Hirose, M.; Sugiyama, M.;
Sasamoto, S.; Kimura, T.; Hosouchi, T.; Matsuno, A.;
Muraki, A.; Nakazaki, N.; Naruo, K.; Okumura, S.; Shimpo,
S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.;
Yasuda, M.; Tabata, S.
#journal DNA Res. (1996) 3:109-136
#title Sequence analysis of the genome of the unicellular
cyanobacterium Synecocystis sp. PCC6803. II. Sequence
determination of the entire genome and assignment of
potential protein-coding regions.
#cross-references EMBL:D90909; GB:AB001339; NID:g1652844; PID:d1018539;
#accession S74845
#molecule_type DNA
#residues 1-463 #label KAN
#cross-references EMBL:D90909; GB:AB001339; NID:g1652844; PID:d1018539;
#note the nucleotide sequence was submitted to the EMBL Data
Library, June 1996
CLASSIFICATION #superfamily Escherichia coli t1dd protein
SUMMARY #length 463 #molecular-weight 50369 #checksum 5364

Query Match 92.7%; Score 38; DB 1; Length 463;
Best Local Similarity 66.7%; Pred. No. 1.62e+01;
Matches 4; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 352 GRGETP 357
||||:|
QY 1 GRGDSP 6

RESULT 14
ENTRY A29782
TITLE unspecific monooxygenase (EC 1.14.14.1) cytochrome P450 2C8 -
human
ALTERNATE_NAMES arachidonic acid epoxidase; cytochrome P450 1; cytochrome
P450 2C2; cytochrome P450 HPH; cytochrome P450 mp-20;
cytochrome P450 p88
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Jun-1989 #sequence_revision 20-Jun-1989 #text_change
05-Mar-1999
ACCESSIONS A29782; A38462; S06306; E28951; C28951; S12688; S15075;
S16902; S66382; S66381; S09471
REFERENCE A29782
#authors S12688
#journal Kolyada, A.Y.
#title Nucleic Acids Res. (1990) 18:5550
#cross-references EMBL:91016847
#accession S12688
#status translation not shown
#molecule_type mRNA
#residues 281-398, 'R', 400-490 #label KOL
#cross-references EMBL:X51535; NID:g23884; PID:g23885
REFERENCE S15075
#authors Ged, C.; Beaune, P.
#journal Biochim. Biophys. Acta (1991) 1088:433-435
#title Isolation of the human cytochrome P-450 IIC8 gene: multiple
glucocorticoid responsive elements in the 5' region.
#cross-references EMBL:91198151
#accession S15075
#status translation not shown
#molecule_type DNA
#residues 1-56 #label GE3
#cross-references EMBL:X54807; NID:g30334; PID:g30335
REFERENCE S16902

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#authors Okino, S.T.; Quattrocchi, L.C.; Pendurthi, U.R.; McBride,
O.W.; Tukey, R.H.
#journal J. Biol. Chem. (1987) 262:16072-16079
#title Characterization of multiple human cytochrome P-450 1 cDNAs.
The chromosomal localization of the gene and evidence for
alternate RNA splicing.
#cross-references MUID:88058968
#accession A29782
#molecule_type mRNA
#residues 1-490 #label OKI
#cross-references EMBL:M17397; NID:g181325; PID:g181326
REFERENCE A38462
#authors Romkes, M.; Faletto, M.B.; Blaisdell, J.A.; Raucy, J.L.;
Goldstein, J.A.
#journal Biochemistry (1991) 30:3247-3255
#title Cloning and expression of complementary DNAs for multiple
members of the human cytochrome P450IIC subfamily.
#cross-references MUID:91182740
#accession A38462
#molecule_type mRNA
#residues 1-490 #label ROM
#cross-references GB:J05326
REFERENCE S06306
#authors Kimura, S.; Pastewka, J.; Gelboin, H.V.; Gonzalez, F.J.
#journal Nucleic Acids Res. (1987) 15:10053-10054
#title cDNA and amino acid sequences of two members of the human
P450IIC gene subfamily.
#cross-references MUID:88096500
#accession S06306
#molecule_type mRNA
#residues 1-129, 'T', 131-263, 'I', 265-490 #label KIM
#cross-references EMBL:Y00498; NID:g297403; PID:g297404
#note cytochrome P450 2C2
REFERENCE A90535
#authors Ged, C.; Umbenhauer, D.R.; Bellew, T.M.; Bork, R.W.;
Srivastava, P.K.; Shindriki, N.; Lloyd, R.S.; Guengerich,
F.P.
#journal Biochemistry (1988) 27:6929-6940
#title Characterization of cDNAs, mRNAs, and proteins related to
human liver microsomal cytochrome P-450 (S)-mephenytoin
4'-hydroxylase.
#cross-references MUID:89062423
#accession E28951
#molecule_type mRNA
#residues 12-129, 'T', 131-192, 'K', 194-263, 'I', 265-410, 'L', 412-490
#label GED
#cross-references GB:M21941; GB:J02832
#accession C28951
#molecule_type protein
#residues 1-9; 11-19; 60-84; 161-179; 187-194; 201-226; 280-297; 378-383
#label GE2
REFERENCE S12688
#authors Kolyada, A.Y.
#journal Nucleic Acids Res. (1990) 18:5550
#title Sequence of a human liver cytochrome P-450 cDNA clone.
#cross-references MUID:91016847
#accession S12688
#status translation not shown
#molecule_type mRNA
#residues 281-398, 'R', 400-490 #label KOL
#cross-references EMBL:X51535; NID:g23884; PID:g23885
REFERENCE S15075
#authors Ged, C.; Beaune, P.
#journal Biochim. Biophys. Acta (1991) 1088:433-435
#title Isolation of the human cytochrome P-450 IIC8 gene: multiple
glucocorticoid responsive elements in the 5' region.
#cross-references MUID:91198151
#accession S15075
#status translation not shown
#molecule_type DNA
#residues 1-56 #label GE3
#cross-references EMBL:X54807; NID:g30334; PID:g30335
REFERENCE S16902

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#authors      Shepard, E.A.; Phillips, I.R.; Santisteban, I.; Palmer,
               C.N.A.; Povey, S.
#journal      Ann. Hum. Genet. (1989) 53:23-31
#title        Cloning, expression and chromosomal localization of a member
               of the human cytochrome P450IIC gene sub-family.
#cross-references MUID:89271645
#accession    S16902
#status       not compared with conceptual translation
#molecule_type mRNA
#residues     34-53, 'L', 55-66, 'L', 68-75, 'C', 77-129, 'T', 131-138, 'K',
               140-208, 'S', 210-263, 'I', 265-382 #label SHE
REFERENCE
S66381
#authors      Zeldin, D.C.; DuBois, R.N.; Falck, J.R.; Capdevila, J.H.
#journal      Arch. Biochem. Biophys. (1995) 322:76-86
#title        Molecular cloning, expression and characterization of an
               endogenous human cytochrome P450 arachidonic acid
               epoxidase isoform.
#accession    S66382
#status       not compared with conceptual translation
#molecule_type mRNA
#residues     'M', 7-129, 'T', 131-263, 'I', 265-410, 'L', 412-490 #label
               ZEL
#accession    S66381
#molecule_type protein
#residues     'X', 2-15 #label ZE2
GENETICS
#gene         GDB:CYP2C8
#cross-references GDB:127450
#map_position 10q24.1-10q24.1
CLASSIFICATION #superfamily human cytochrome P450 CYP2D6; cytochrome P450
               homology
KEYWORDS       chromoprotein; electron transfer; endoplasmic reticulum;
               heme; iron; monooxygenase; oxidoreductase; transmembrane
               protein
FEATURE
294-457       #domain cytochrome P450 homology #label CYP\
435           #binding_site heme iron (Cys) (axial ligand) #status
               predicted
SUMMARY        #length 490 #molecular-weight 55855 #checksum 9139
               Query Match 92.7%; Score 38; DB 2; Length 490;
               Best Local Similarity 83.3%; Pred. No. 1.62e+01;
               Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 96 GRGNSP 101
   |||:||
QY 1 GRGDSP 6

RESULT 15
ENTRY   JC4163 #type complete
TITLE   DNA-binding protein SE5 - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE    27-Aug-1995 #sequence_revision 19-Oct-1995 #text_change
        07-Nov-1997
ACCESSIONS JC4163; PC4040
REFERENCE   JC4163
#authors    Suzuki, E.; Kojima, N.; Yoshimura, K.; Uyemura, K.; Obata,
            K.; Akagawa, K.
#journal    J. Biochem. (1995) 118:122-128
#title      Cloning and sequence analysis of cDNA for a possible
            DNA-binding protein SE5 in the nervous system.
#accession  JC4163
#molecule_type mRNA
#residues   1-825 #label SUZ
#cross-references DBJ:D37934; NID:9531260; PID:d1007730; PID:g531261
#experimental_source brain
#accession  PC4040
#molecule_type protein
#residues   230-455 #label SU2
COMMENT     This protein has an abundance of arginine, a glycine-rich region
            and a proline cluster. This protein has a DNA-binding ability and
            is expressed especially in neurons.

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KEYWORDS       nerve; phosphoprotein
FEATURE
436-443       #region nuclear location signal\
722-731       #region proline cluster\
62,258,345,360,404,
413,570,613,635,
752,820       #binding_site phosphate (Ser) (covalent) (by protein
               kinase C) #status predicted
SUMMARY        #length 825 #molecular-weight 86831 #checksum 7778
               Query Match 92.7%; Score 38; DB 2; Length 825;
               Best Local Similarity 83.3%; Pred. No. 1.62e+01;
               Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 430 GRGDSP 435
   |||:|
QY 1 GRGDSP 6

Search completed: Thu Dec 23 10:07:48 1999
Job time : 15 secs.

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